



US005149826A

United States Patent [19][11] **Patent Number:** **5,149,826****Delabouglise et al.**[45] **Date of Patent:** **Sep. 22, 1992**[54] **POLY[(3-PYRROLYL)ACETIC ACID]**[75] **Inventors:** **Didier Delabouglise; Francis Garnier,**
both of Thiais, France[73] **Assignee:** **Nippon Oil Co., Ltd.,** Tokyo, Japan[21] **Appl. No.:** **637,631**[22] **Filed:** **Jan. 4, 1991**[30] **Foreign Application Priority Data**

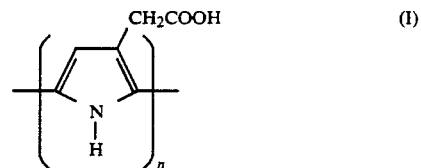
Jan. 8, 1990 [JP] Japan 2-409

[51] **Int. Cl.⁵** **C07D 207/30; C08F 26/06**[52] **U.S. Cl.** **548/518; 526/258**[58] **Field of Search** **548/518; 526/258**[56] **References Cited****U.S. PATENT DOCUMENTS**

5,059,694 10/1991 Delabouglise et al. 548/518

Primary Examiner—Mary C. Lee*Assistant Examiner*—Joseph K. McKane*Attorney, Agent, or Firm*—Oblon, Spivak, McClelland,
Maier & Neustadt[57] **ABSTRACT**

A poly[(3-pyrrolyl)acetic acid] is here disclosed which is represented by the formula (I)



wherein n is an integer of 2 or more.

This polymer can be prepared by subjecting (3-pyrrolyl)acetic acid to electrolytic oxidation polymerization in the presence or absence of a salt. The polymer can be used as a pH sensor in which electrical properties change in accordance with a pH. Furthermore, it can also be used as electrodes for a secondary battery in which a cation transport electrolyte is used.

2 Claims, 1 Drawing Sheet